SAFETY DATA SHEET

1. Identification

GHS product identifier	**LP™ 100 Flow Improver**
Version No.	02
Issue date	19-April-2017
Revision date	30-December-2021
Supersedes date	30-December-2021
CAS No.	Mixture
Recommended use	Flow Improver.
Recommended Restrictions	Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

Manufacturer

Manufacturer	LiquidPower Specialty Products Inc.
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2. Hazards identification

GHS classification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.

GHS label elements

Signal word	None.
Hazard symbols	None.
Hazard statement	The mixture does not meet the criteria for classification.

Precautionary statement

Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Other hazards which do not result in classification	None known.
Supplemental information	None.

3. Composition/information on ingredients

The components are not hazardous or are below required disclosure limits.

4. First aid measures

First aid procedures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed	Direct contact with eyes may cause temporary irritation.
Notes to physician	Treat symptomatically.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Protection of fire-fighters	Move containers from fire area if you can do so without risk.

6. Accidental release measures

Personal precautions	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
Methods for cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Handling	Avoid prolonged exposure. Observe good industrial hygiene practices. Ensure adequate ventilation.
Storage	Store in a closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls / personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Follow standard monitoring procedures. No exposure standards allocated.
Recommended monitoring procedures	Follow standard monitoring procedures.
Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Personal protective equipment	
Eye/face protection	Risk of contact: Wear approved safety goggles.
Skin protection	If prolonged or repeated contact is likely, chemical resistant clothing is recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hand protection	Use suitable protective gloves if risk of skin contact.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Colour	White.
Odour	Mild.
Odour threshold	Not available.
pH	10 - 12.4
Melting point/freezing point	0 °C (32 °F)
Initial boiling point and boiling range	100 °C (212 °F)
Flash point	Not applicable.
Evaporation rate	Same as water.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not applicable.

Explosive limit – upper (%)	Not applicable.
Vapour pressure	23.8 mmHg (25°C)
Vapour density	< 1 (Air = 1)
Relative density	0.84 - 0.97 (25°C / 77°F)
Solubility(ies)	
Solubility (water)	Disperses completely.
Partition coefficient (n-octanol/water)	Property has not been measured.
Auto-ignition temperature	Property has not been measured.
Decomposition temperature	Property has not been measured.
Viscosity	50 - 200 cP 511s-1 (Non-Newtonian) (25°C)
Other information	
Explosive properties	Not explosive.
Kinematic viscosity	Property has not been measured.
Oxidising properties	Not oxidising.
Particle size	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Routes of exposure	Ingestion. Skin contact. Eye contact.
Toxicological information	No adverse effects are expected.
Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Serious eye damage/eye irritation	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Respiratory sensitiser	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Skin sensitisation	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Mutagenicity	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Carcinogenicity	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Reproductive toxicity	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Specific target organ toxicity - single exposure	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Specific target organ toxicity - repeated exposure	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Aspiration hazard	Not an aspiration hazard.

Local effects	May irritate eyes and skin.
Chronic effects	None known.
Symptoms	Direct contact with eyes may cause temporary irritation.
Human experience	No data available.
Other information	None known.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	No data available.
Bioaccumulation	No data available.
Aquatic toxicity	Not classified.
Mobility	This product is miscible in water. Expected to be mobile in soil.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods	Waste material from this product should not be exposed to waste streams or sumps containing any concentration of hydrocarbon. This will cause formation of gelled substances that may plug pipes. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Waste from residues / unused products	Dispose in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to IMO instruments	Not applicable.

15. Regulatory information

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Disclaimer

LiquidPower Specialty Products Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

List of abbreviations

LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
vPvB: very Persistent, very Bioaccumulative.
TWA: Time weighted average.
STEL: Short term exposure limit.
TLV: Threshold Limit Value.